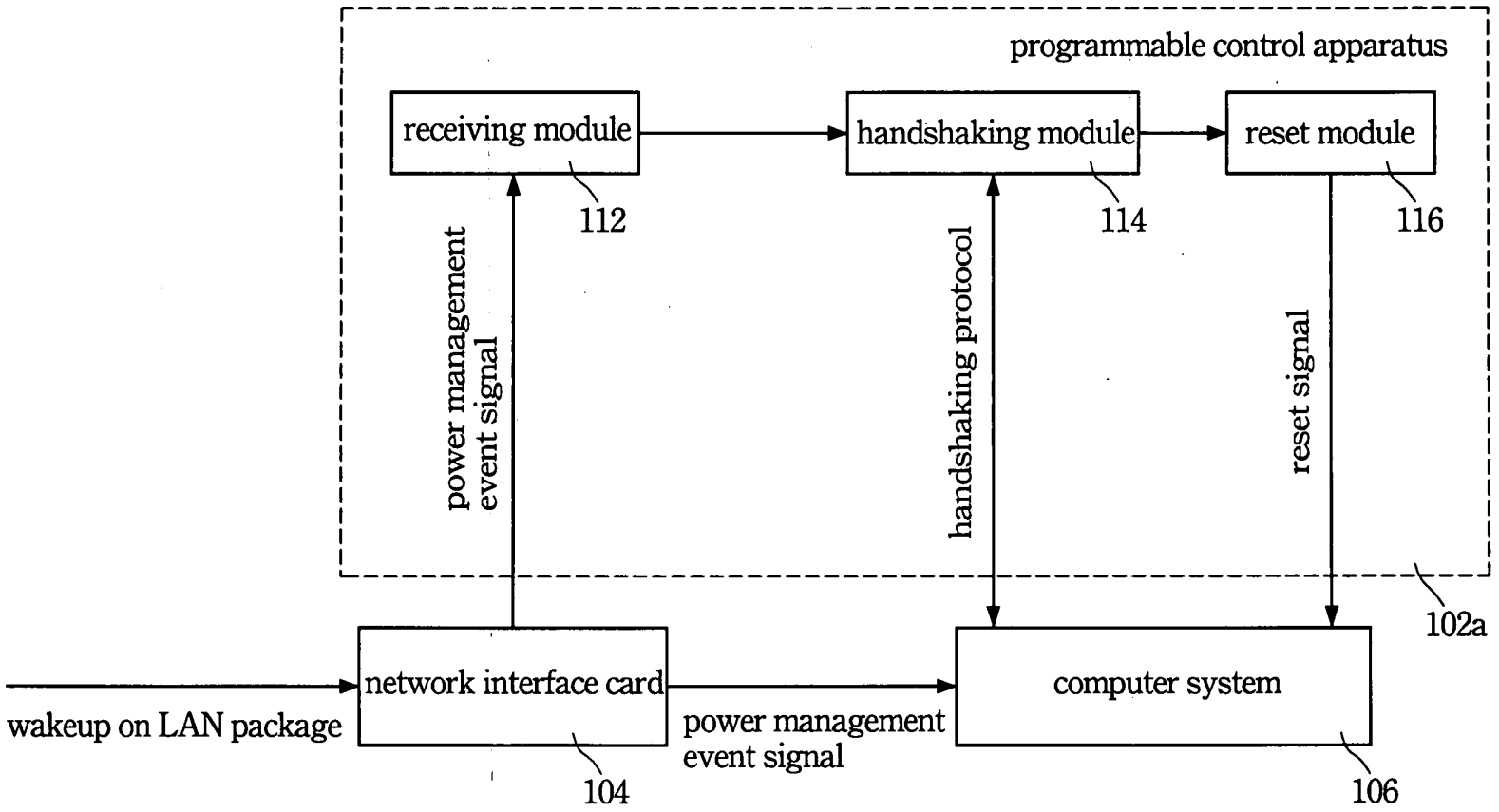
programmable control apparatus
receiving module
handshaking module
reset module
112
114
116
power management event signal
handshaking protocol
reset signal
102a
network interface card
computer system
wakeup on LAN package
power management event signal
104
106

Fig. 1

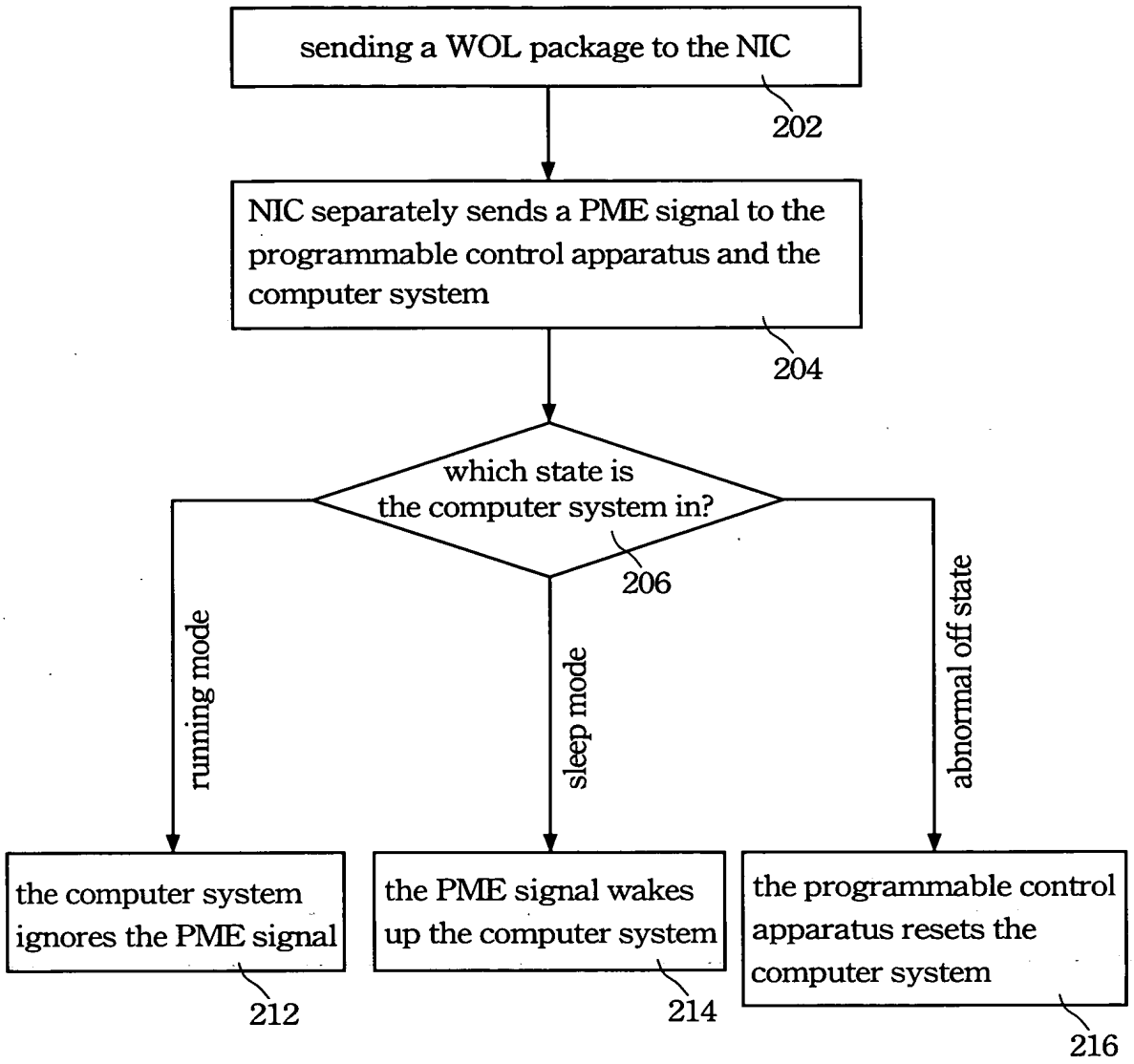
sending a WOL package to the NIC
202
NIC separately sends a PME signal to the programmable control apparatus and the computer system
204
which state is the computer system in?
206
running mode
sleep mode
abnormal off state
the computer system ignores the PME signal
212
the PME signal wakes up the computer system
214
the programmable control apparatus resets the computer system
216

Fig. 2

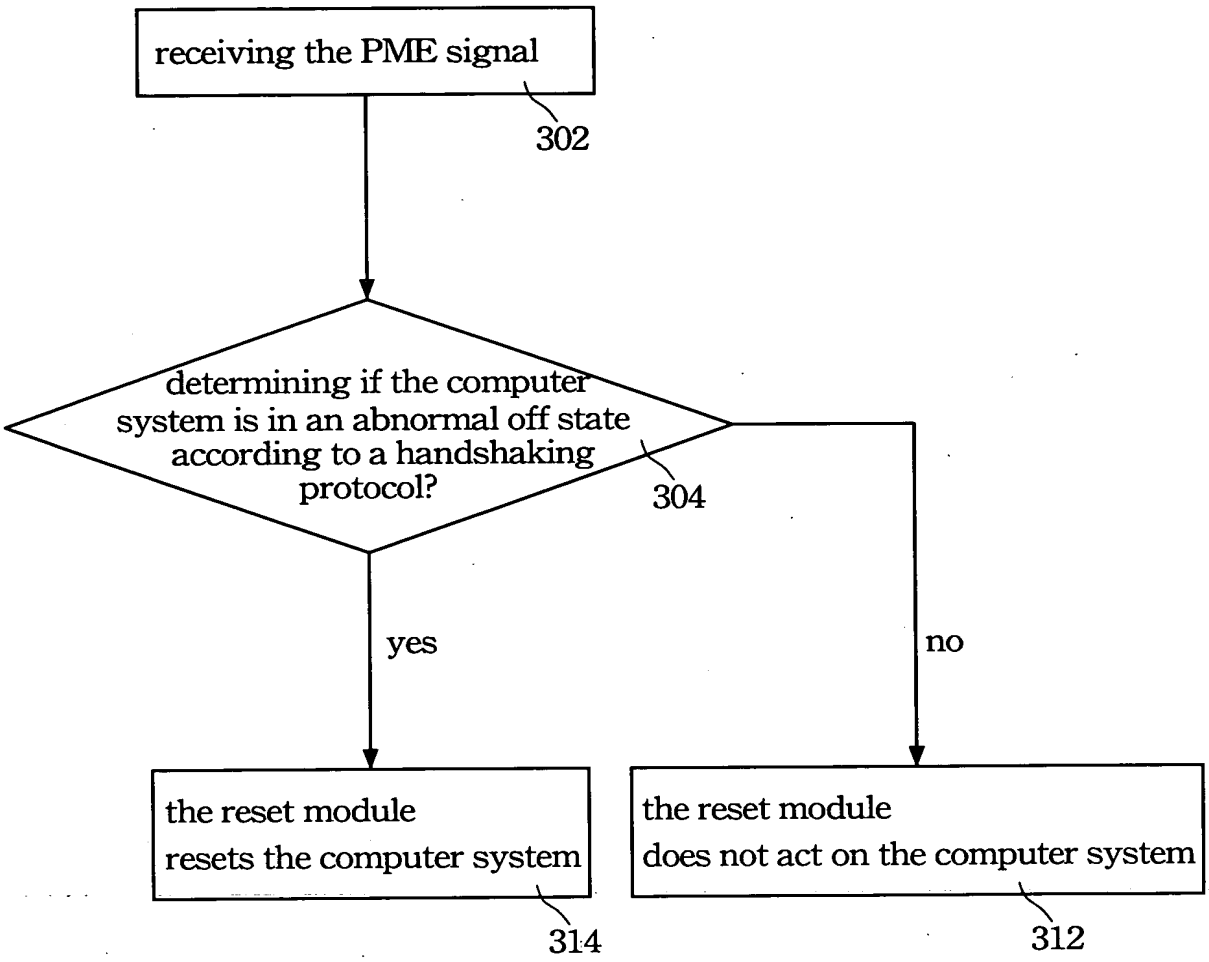
receiving the PME signal
302
determining if the computer system is in an abnormal off state according to a handshaking protocol?
304
yes
no
the reset module resets the computer system
314
the reset module does not act on the computer system
312

Fig. 3

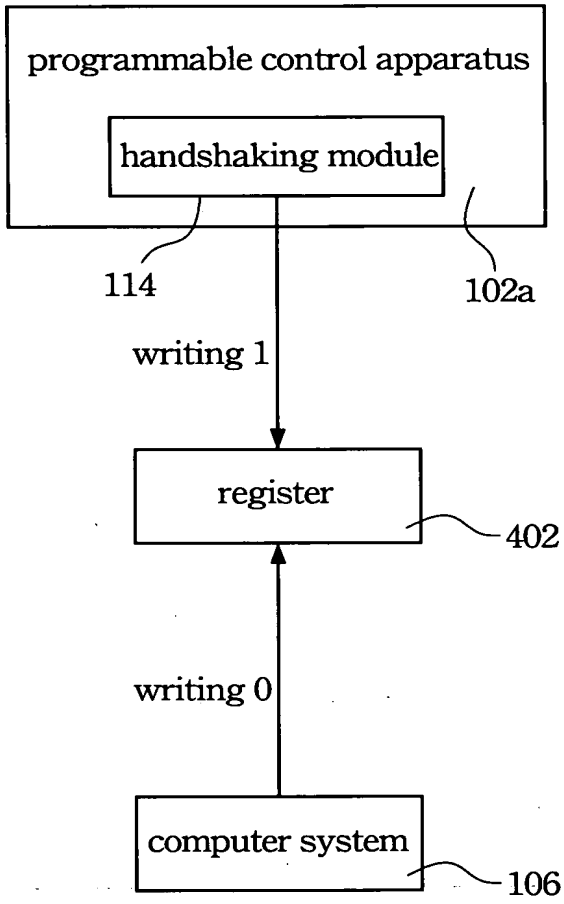
programmable control apparatus
handshaking module
114
102a
writing 1
register
402
writing 0
computer system
106

Fig. 4

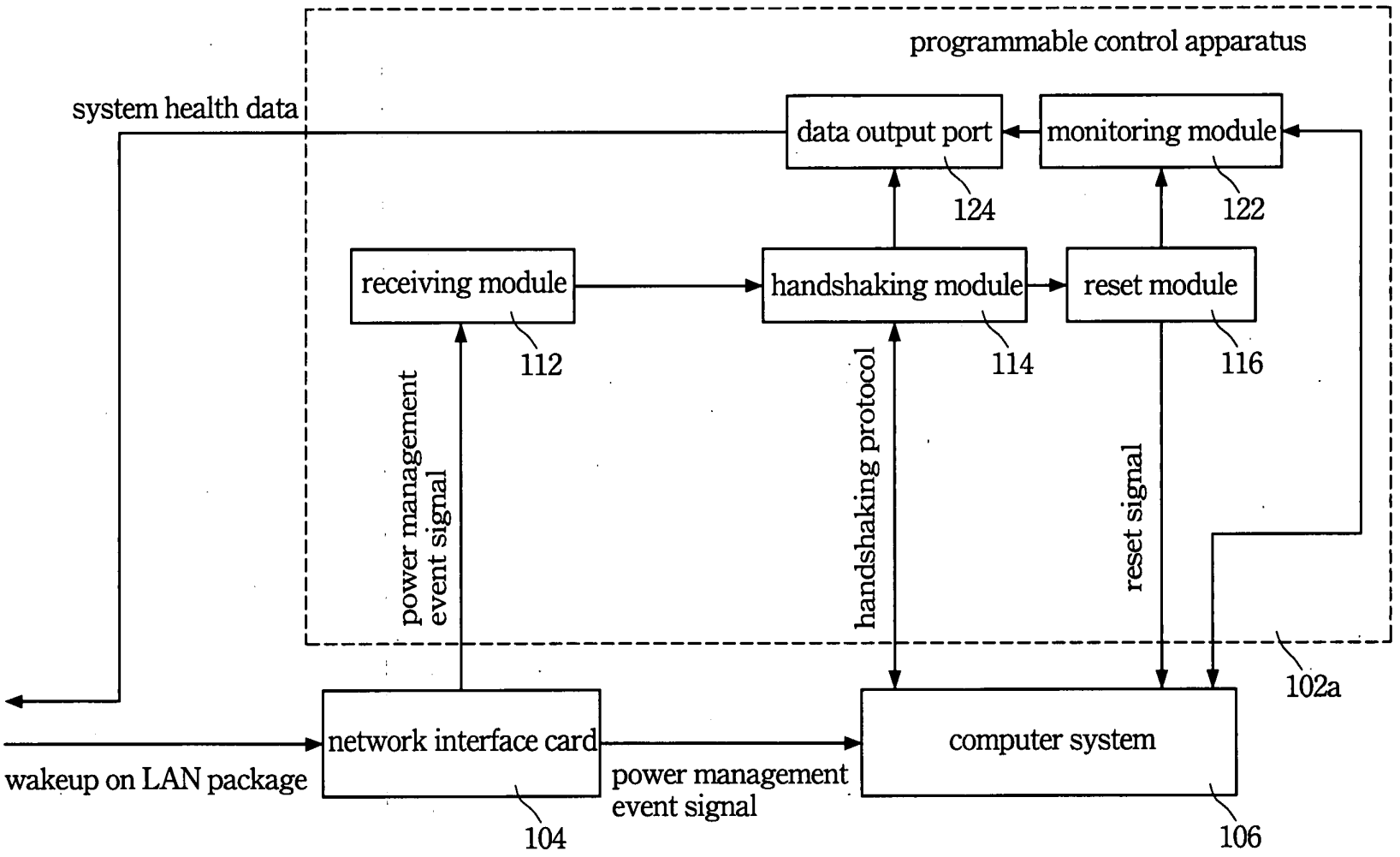
programmable control apparatus
system health data
data output port
monitoring module
124
122
receiving module
handshaking module
reset module
112
114
116
power management event signal
handshaking protocol
reset signal
102a
network interface card
computer system
wakeup on LAN package
power management event signal
104
106

Fig. 5

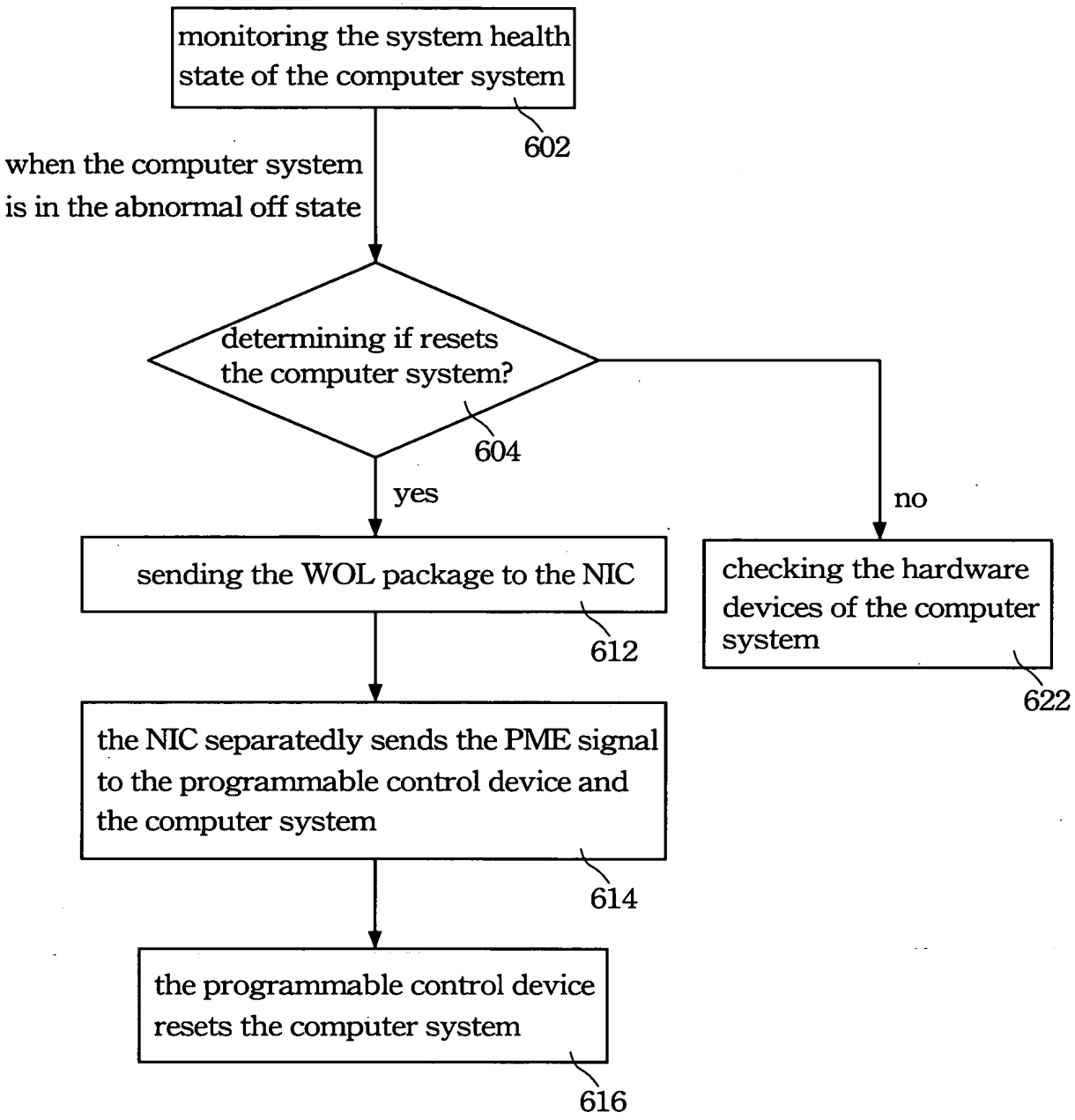
monitoring the system health state of the computer system
602
when the computer system is in the abnormal off state
determining if resets the computer system?
604
yes
no
sending the WOL package to the NIC
612
checking the hardware devices of the computer system
622
the NIC separatedly sends the PME signal to the programmable control device and the computer system
614
the programmable control device resets the computer system
616

Fig. 6